Nov. 9, 1965 H. B. HUNTER 3,216,727

GAME BATON

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FIG. 1

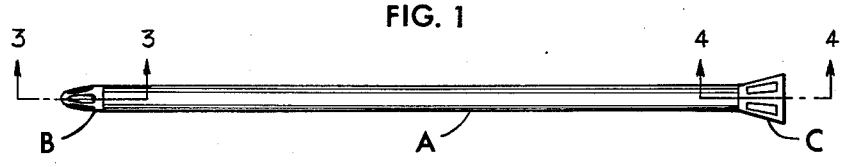
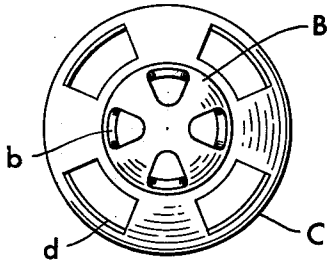


FIG. 2



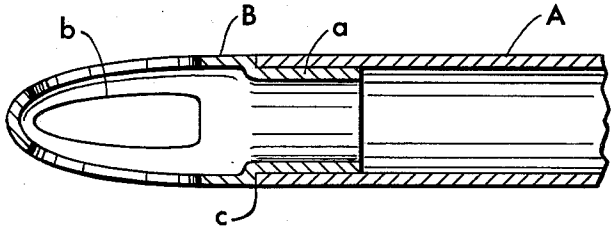
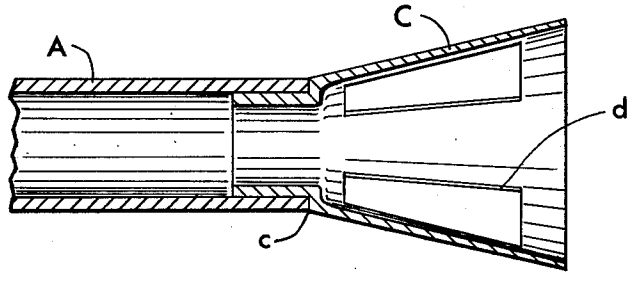


FIG. 3

FIG. 4



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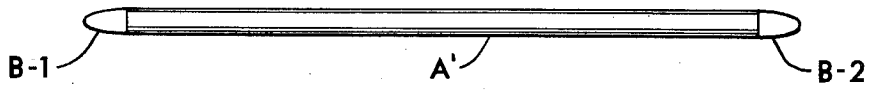
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FIG. 5



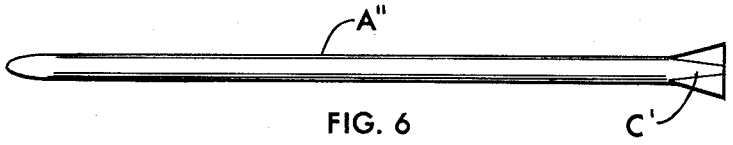


FIG. 6

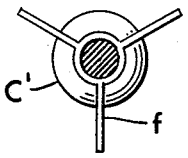
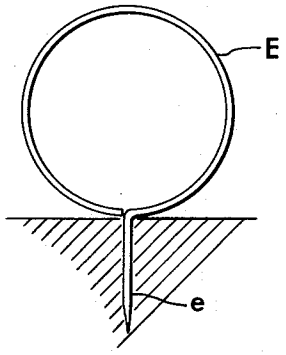


FIG. 7

FIG. 8



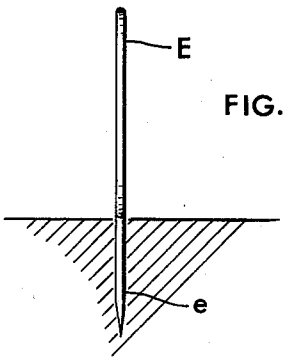


FIG. 9

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GAME BATON

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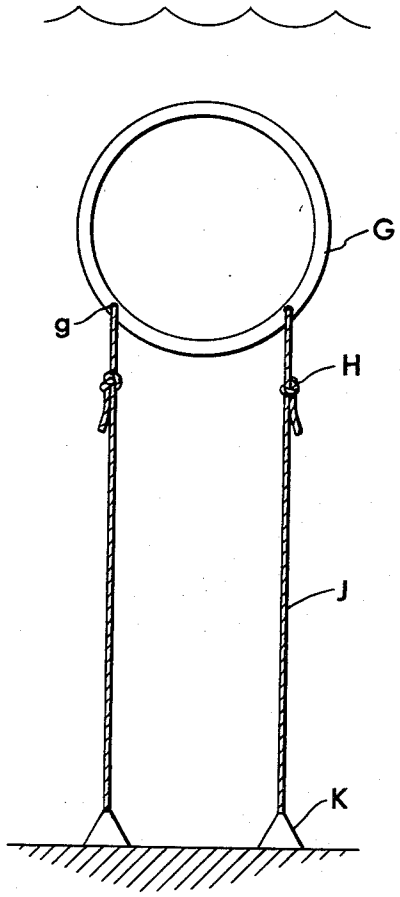


FIG. 10

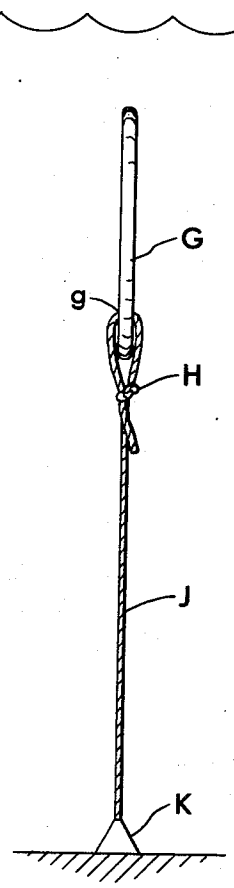


FIG. 11

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3,216,727

Patented Nov. 9, 1965

3,216,727

GAME BATON

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Filed May 14, 1962, Ser. No. 194,291
3 Claims. (Cl. 273—102)

This invention relates generally to game devices and more particularly to a certain new and useful improvement in game devices which are adapted for manual trajection in a variety of amusement and exercise activities.

It is an object of my invention to provide a game device of the type stated which is adapted for projection through the air or through water as a spear or javelin, and which is safe, or has little or no hazard connected with its use.

More specifically, it is an object to provide a game device of the type and for the purpose stated which may be economically produced and which includes a light hollow shaft member having a flexible hollow tip at either end, said device being usable as a safe spear, javelin or similar article in a variety of games and exercises, and a target for optional use therewith.

In the accompanying drawings (3 sheets),

FIGURE 1 is a side elevational view of a game device of my invention.

FIGURE 2 is a left end elevational view of the device shown in FIGURE 1.

FIGURE 3 is a fragmentary transverse sectional view of an end of the device, taken approximately along the line 3—3, FIGURE 1.

FIGURE 4 is a fragmentary transverse sectional view of the other end of the device, taken approximately along the line 4—4, FIGURE 1.

FIGURE 5 is an elevational view of a slightly modified form of my invention.

FIGURE 6 is an elevational view of a second slightly modified form of my invention.

FIGURE 7 is a right end view of the device shown in FIGURE 6.

FIGURE 8 is a front elevational view of a target specifically adapted for outdoor use.

FIGURE 9 is a side elevational view of the target shown in FIGURE 8.

FIGURE 10 is a front elevational view of a modified form of target specifically adapted for underwater use.

FIGURE 11 is a side elevational view of the target shown in FIGURE 10.

Referring now in more detail and by reference characters to the drawings, which illustrate a preferred embodiment of my invention, the shaft member A of the present device is preferably tubular in form and is provided at its ends with the hollow flexible tips B and C, which are adhesively or otherwise secured in place, all as best seen in FIGURES 1–4.

The entire device is porticularly adapted for use as a safe manual projectile with tip member B acting as a cushioning nose piece and tip C acting as a flexible stabilizing and decelerating tail piece. The rounded, generally paraboloidal shape of the nose tip B as well as its flexibility are specifically provided to reduce the possibility of injury or damage to property upon impact. Elongated holes or openings *b*, FIGURES 2 and 3, preferably provided in tip B allow passage of air or water through the entire device thereby increasing frictional resistance while the device is in flight. Holes *b* also contribute to the flexibility of tip B by permitting the elongated sections separating holes *b* to distort individually and by reducing the amount of material that must distort upon impact. The flare of tip C is provided to offer increased frictional resistance and thereby serve to decelerate and stabilize the entire device when in flight In addition to providing for a convenient fit with separate

tip members B and C, another advantage of the hollow shape of the shaft member A is that it may be economically produced very light in weight while retaining a circumferential size suitable for grasping as a spear or javelin, also being adapted for digital manipulation as a twirling baton. The lightness of weight of shaft member A further enhances the safety of the device.

A preferred design for tip B especially adapted for fitting the end of a tube is shown in FIGURE 3. The outer surface of tip B coincides with the exterior surface of shaft member A at *c*, thereby providing a smooth flush joint, where section *a* of tip B is provided of suitable size and shape to afford fitted entrance thereof inside the end of shaft member A. A preferred design for tip C, as best seen in FIGURE 4 similarly permits a fitted junction with shaft member A, also providing a smooth joint. Holes or openings *d* may be provided in tip C as shown in FIGURES 2 and 4 to decrease the amount of material required in this part and to increase its flexibility.

Members A, B, and C are preferably made from polyethylene or other material whose specific gravity is less than that of water so when used in water sport activities the device will rise to the surface to facilitate recovery. However, for primarily underwater use, the device may be made from a material or materials such that the average specific gravity of the device is just equal to that of water, in which case the device will "float" under water at the depth at which the impelling force on it is spent. Preferred methods of securing tips B and C to shaft member A include manufacture of parts A, B, and C from a thermoplastic material and subsequently thermally welding these together at their respective joints; using adhesives to join these members together, or bonding a strip of material over each joint.

An outer target may be provided in the form of a ring E having a straight portion *e* normal to its circumference which serves as a ground anchor pin all as shown in FIGURES 8 and 9 wherein the shaded portion represents the ground. The object is to throw the device shown in FIGURE 1 into or through the target E from a spaced distance as a test of skill by one player or by a number of players in competition. These targets will preferably be supplied in pairs so the thrower may retrieve his projectile or projectiles at one target and then be ready to aim at another target at his original starting point, and to allow play according to rules similar to the game of horseshoe pitching, so competing persons or teams may play without having to walk the trajectory distance between turns.

I may also provide a slightly modified form of game device as best seen in FIGURE 5 in which the shaft member A′ is provided with two identical hollow rounded tips B–1 and B–2, one at each end. This modified game device embodies the salient features of the device shown in FIGURE 1 and simplifies the manufacture of the complete device. Also its symmetry makes it particularly adapted for use as a twirling baton. Since no exterior holes or openings are provided in modified tips B–1 and B–2, there will be a cushioning effect due to the compression of the air entrapped within the device when it strikes an object so as to depress tip B–1 or B–2. The entrapped air also imparts buoyancy to the device, thus making it particularly adapted to water sports wherein its recovery on the surface is desirable.

I may provide a second slighly modified form of game device as shown in FIGURE 6, wherein the shaft member A″ and the tips B′ and C′ are formed together as one unit. Modified tip C′ has stabilizing fins *f* projecting substantially normal to the axis of shaft A″, as best seen in FIGURE 7.

A slightly modified form of target G specifically adapted for underwater use may also be provided, said target com-

prising a buoyant ring G which acts as a target and which is secured in position under water by two strings or cords J attached to ring G in spaced relationship, in the present instance through holes *g* preferably provided in ring G, the opposite ends of cords J being secured in similarly spaced position by weights K respectively attached thereto, all as shown in FIGURES 10 and 11. The ends of cords J which are attached to ring G may be secured to the respective sections of cords J between ring G and weights K by means of adjustable knots H, thus allowing players to adjust the depth of ring G as desired. The depth of ring G may also be adjusted by moving the weights K further apart and closer together. The modified target G may also be used in a variety of games or exercise activities wherein players are required to swim through the ring G or between the cords J.

The game apparatus as herein described provides for a variety of interesting and amusing activities and games with a high degree of safety and it should be understood that changes and modifications in the form, construction, arrangement, and combination of the several parts may be made and substituted for those herein shown and described without departing from the nature and principle of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a game baton, a substantially rigid straight hollow shaft adapted to permit manual manipulation and trajection, said shaft having a thin hollow, flexible tip at either end, the outer surface of said tip conforming in contour to that of said shaft where they join, said tip tapering generally paraboloidally to a rounded point, said tip provided with a plurality of longitudinal apertures arranged symmetrically with respect to the longitudinal axis, said apertures adapted to permit the tip sections therebetween to deform outwardly upon normal impact with a stationary object, thus providing a cushioning effect, said apertures also permitting the flight medium to flow through the entire device, thus increasing frictional resistance therewith to decelerate the entire device while in flight.

2. The device of claim 1 wherein the end of said shaft member opposite to said end having said rounded tip is provided with a thin flexible tip whose outer surface conforms to that of said shaft where they join, said second tip flaring therefrom to an increased size at its outer extremity, thus providing frictional resistance to the flight medium while the entire device is in flight.

3. The device of claim 1 and a target for conjunctive use therewith, said target adapted for underwater use, said target comprising a buoyant ring secured in position underwater by two strings or cords attached in spaced relationship to said ring, the opposite ends of said cords being secured in similarly spaced relationship by weights respectively attached thereto, as set forth.

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